

Alcat adding divalent and trivalent metal salts to said solution precipitating the layered double hydroxide having the fluorine compound between layers.

5. (Amended) The treatment process of the solution containing the fluorine compound according to claim 1,

wherein the divalent metal salt is a salt of magnesium, calcium, zinc, nickel, copper, manganese (divalent), or cobalt (divalent), and the trivalent metal salt is a salt of aluminum, iron, chromium, manganese (trivalent), cobalt (trivalent), potassium, lanthanum, or scandium.

6. (Amended) The treatment process of the solution containing the fluorine compound according to claim 1,

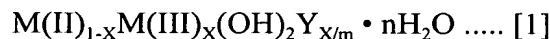
wherein the divalent and the trivalent metal salts are chlorides.

7. (Amended) The treatment process of the solution containing the fluorine compound according to claim 1,

wherein the fluorine compound is carboxylic acid ^{or a} ~~of~~ sulfonic acid having the fluorocarbon chain, in which the number of carbon is more than 5.

8. (Amended) The treatment process of the solution containing the fluorine compound according to claim 1,

wherein the layered double hydroxide having the fluorine compound between layers is shown in the following formula [1] ^{claim 1}:



where, Y is an anion having valence number m of the fluorine compound having the fluorocarbon chain, M(II) is a divalent metal ion, M(III) is a trivalent metal ion, X is 0.1 to 0.5, and n is 0 or positive integer.

9. (Amended) A treatment process for recovering for fluorine compound and its salts, the process comprising,

about

precipitating the layered double hydroxide by the treatment process according to claim 1,
 recovering the solid part by ~~the~~ solid-liquid separation,
 dissolving said recovered solid part in a mineral acid to recover the separated fluorine compound or its salts, or
 heating said mineral acid dissolving the recovered solid part,
 putting quietly to separate an oil layer, and
 taking out the oil layer to recover the fluorine compound and its salts.

10. (Amended) A treatment process for recovering a fluorine compound and its salts, the process comprising,

precipitating the layered double hydroxide by the treatment process according to claim 1,
 recovering the solid part by ~~the~~ solid-liquid separation,
 dispersing the recovered solid part to an organic solvent, and
 filtering an insoluble part from said solvent.

Please add the following new claims.

A2 *11* 12. (New) The treatment process of the solution containing the fluorine compound according to claim 2, the process further comprising,
 adjusting pH of the solution to more than 4,
 precipitating the layered double hydroxide having the fluorine compound between layers.

12 13. (New) The treatment process of the solution containing the fluorine compound according to claim 2, the process further comprising,

Q2 cont

adding an alkali to the solution to adjust pH from 4 to 12,
adding divalent and trivalent metal salts to said solution precipitating the layered
double hydroxide having the fluorine compound between layers.

13 14. (New) The treatment process of the solution containing the fluorine compound
according to claim 2,

wherein the divalent metal salt is a salt of magnesium, calcium, zinc, nickel, copper,
manganese (divalent), or cobalt (divalent), and the trivalent metal salt is a salt of aluminum,
iron, chromium, manganese (trivalent), cobalt (trivalent), potassium, lanthanum, or scandium.

14 15. (New) The treatment process of the solution containing the fluorine compound
according to claim 2,

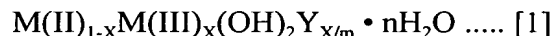
wherein the divalent and the trivalent metal salts are chlorides.

15 16. (New) The treatment process of the solution containing the fluorine compound
according to claim 2/

wherein the fluorine compound is carboxylic acid or sulfonic acid having the^a
fluorocarbon chain, in which the number of carbon is more than 5.

16 17. (New) The treatment process of the solution containing the fluorine compound
according to claim 2,

wherein the layered double hydroxide having the fluorine compound between layers
is shown in the following formula [1] ¹⁰⁰



where, Y is an anion having valence number m of the fluorine compound having the
fluorocarbon chain, M(II) is a divalent metal ion, M(III) is a trivalent metal ion, X is 0.1 to
0.5, and n is 0 or positive integer.

A

Abstract
17

18. (New) A treatment process for recovering for fluorine compound and its salts, the process comprising,

precipitating the layered double hydroxide by the treatment process according to claim 2,

recovering the solid part by the solid-liquid separation,

dissolving said recovered solid part in a mineral acid to recover the separated fluorine compound or its salts, or

heating said mineral acid dissolving the recovered solid part,

putting quietly to separate an oil layer, and

taking out the oil layer to recover the fluorine compound and its salts.

18/19 (New) A treatment process for recovering a fluorine compound and its salts, the process comprising,

precipitating the layered double hydroxide by the treatment process according to claim 2,

recovering the solid part by the solid-liquid separation,

dispersing the recovered solid part to an organic solvent, and

filtering an insoluble part from said solvent.